

## REMARKS

Claims 1, 7-11, and 17-26 are pending in the application. Claims 1, 7-11, 17-20, 22, 23, 25, and 26 are amended in this reply.

### CLAIM REJECTIONS—35 U.S.C. § 103

Claims 1, 7-8, 11, 17-18, and 21-26 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over U.S. Patent No. 7,145,358 (“Gravano”) in view of U.S. Patent No. 6,460,037 (“Weiss”).

Claims 9-10 and 19-20 were rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Gravano and Weiss and further in view of U.S. Patent No. 7,127,450 (“Chang”).

The Applicants traverse all of these rejections for at least the reasons discussed below.

As amended, Claim 1 recites, among other features, “generating a filtered list at least in part by filtering said list of candidate alternative spellings based on a comparison of (a) a first frequency of occurrences of said first spelling in said plurality of files to (b) a second frequency of occurrences, in said plurality of files, of a second spelling from said list of candidate alternative spellings.” Notably, the first spelling is a spelling that **is contained in a query that was entered by a user**. Thus, Claim 1 requires a comparison of (a) frequencies of occurrences of a user-entered query term to (b) frequencies of occurrences of an alternative spelling of that query term.

Although Gravano discusses, in col. 7, lines 5-15, the computation of a frequency of co-occurrences of **translations** within a search corpus, **neither** of these translations is a word that the user entered as a part of the original query terms. Instead, in Gravano, **both** of these translations are in a **different language** than the language in which the user-entered query terms

were expressed. Thus, in Gravano, the frequency of co-occurrences does **not** involve a user-entered query term in any way. For example, referring to Gravano's text, if the user entered the Spanish "bancos interes," then the frequency of co-occurrences might involve the English translations "banks," "benches," "concern," and "interest," but would **not** involve either of the user-submitted Spanish terms "bancos" or "interes."

Consequently, Gravano does not disclose, teach, or suggest "generating a filtered list at least in part by filtering said list of candidate alternative spellings based on a comparison of (a) a first frequency of occurrences of said first spelling in said plurality of files to (b) a second frequency of occurrences, in said plurality of files, of a second spelling from said list of candidate alternative spellings" as recited in Claim 1. The Office Action does not even allege that any of the other cited references discloses this feature of Claim 1. Therefore, even if all of the cited references could be combined somehow, even the combination still would not disclose, teach, or suggest this feature of Claim 1.

Additionally, as is discussed in the reply to the previous Office Action, Claim 1 recites features including "searching, within said second file, for **any** spellings that satisfy particular criteria; wherein said particular criteria includes that said spellings are spelled similarly to, but not exactly the same as, said first spelling;" and "adding, to a list of candidate alternative spellings of said first spelling, **all** spellings within said second document that satisfy said particular criteria." Thus, according to the method of Claim 1, **any** spellings that are (a) in the second document and (b) spelled similarly to, but not exactly the same as, the first spelling, are **searched for**. Also, according to the method of Claim 1, **all** spellings that satisfy these criteria are added to the list of candidate alternative spellings.

As was previously discussed, Gravano's approach does not involve such features. In Gravano, a query translation engine uses a dictionary to identify potential translations. The query translation engine uses text from the linked-to documents to disambiguate among these

translations. Thus, Gravano's search engine can translate the entered query **only** into one of the translations that already exists in the dictionary. Gravano's approach does not search for **any** translations that exist in the linked-to documents—only those that are already in the dictionary. If the linked-to documents contain translations that are **not** in the dictionary, then Gravano's approach will **not** translate the original query using those translations. Thus, under Gravano's approach, less than **all** of the translations in the linked-to documents will be considered for the translation process. Thus, Gravano differs from Claim 1 in at least these aspects.

The Final Office Action contends that Weiss discloses an approach that determines similarly-spelled words from a database. However, these words are found in a **database**, and **not** in a second document to which a link in the first document (which contains the link that indicates the first spelling) links.

Perhaps the Office Action is suggesting that Gravano's approach be modified so that, instead of coming up with **translations** of words contained in a link, Gravano's approach comes up with **alternative spellings** of words contained in a link (this appears to be the reason that the Office Action seeks to combine Weiss with Gravano—just to change Gravano's "translations" into "candidate alternative spellings"). However, **even if this modification is performed**, the Office Action's proposed combination of Gravano and Weiss **still** would **not** search for **any** candidate alternative spellings that existed in the linked-to documents—only those that were already in the dictionary (per Gravano) or the database (per Weiss). If the linked-to documents contained similar spellings that were **not** in the dictionary (per Gravano) or the database (per Weiss), then the proposed combination would **not** come up with those similar spellings as candidate alternative spellings. Thus, even under the proposed combined approach, less than **all** of the similar spellings in the linked-to documents would be considered as candidate alternative spellings.

The proposed combined approach would have the flaw that, if a linked-to document contained a similar spelling that was a very good candidate alternative spelling, but if that similar spelling was not also contained in the dictionary (per Gravano) or the database (per Weiss), then that similar spelling would be undesirably **excluded** as a candidate alternative spelling. The method of Claim 1, by adding **all** similar spellings within the linked-to document as candidate alternative spellings, does not suffer from this flaw.

Therefore, even if Gravano and Weiss could be combined somehow, the combination **still** would not disclose, teach, or suggest all of the features of Claim 1.

Additionally, modifying Gravano in the manner suggested by the Office Action would **destroy the fundamental principle of operation** of Gravano's approach. As was discussed in the reply to the previous Office Action, words in different languages that might be accurate translations might be spelled vastly differently from each other. If Gravano's approach were modified so that translations were determined based on similarity of spelling to the original word, then the translations produced might be highly inaccurate—or, at least, many accurate translations might be ignored due to their vastly different spellings.

Alternatively, if Gravano's approach is merely modified so that a spell check of the original word in the link is performed before translations for that word are looked for, then the combination of Gravano and Weiss **still** does not disclose the method recited in Claim 1. Under such a hypothetical combination of Gravano and Weiss, the similar spellings of the original word would be looked for in a **database** rather than a **second document to which the first document, containing the original-word-indicating link, links**. Then, after a similar spelling of the word was found in the **database**, a **translation** of the similar spelling might be looked for in the linked-to document (even **that** translation would only be considered if it were **also** in Gravano's dictionary). It **still** would not be the case, under such a hypothetical combination, that any and **all** similar spellings in the linked-to document would be found and placed in a list of candidate

alternative spellings. The only difference between the hypothetical combination and Gravano's present approach would be that translations for a misspelled word in the link, which otherwise might not be found due to the misspelling, might be found due to the spell checking performed prior to the search for translations. Many good translations, not contained in Gravano's dictionary, might still be undesirably excluded, even if those good translations actually were present in the linked-to documents.

Additionally, it is improper to analogize Weiss' database to the "second file" of Claim 1 (as the Office Action appears to do) because Weiss' database is **not** linked to by the link in the document that contains the original (first) spelling. Claim 1 requires that the second file, in which the similar spellings are found, must be linked to by a link that (a) is in the first file and (b) contains the original (first) spelling. There is no teaching, disclosure, or suggestion in any of the cited references that would lead one of ordinary skill in the art to cause a link in a document to link to a **database** of the kind discussed in Weiss.

For at least the above reasons, Claim 1 is patentable over Gravano and Weiss, even when considered in combination, under 35 U.S.C. § 103(a).

By virtue of their dependence from Claim 1, Claims 7, 8, and 21-23 inherit the patentable features of Claim 1 discussed above. Therefore, for at least the reasons discussed above in connection with Claim 1, the Applicants respectfully submit that Claims 7, 8, and 21-23 are also patentable over Gravano under 35 U.S.C. § 102(e).

Claims 11, 17, 18, and 24-26 are computer-readable medium analogues to the methods recited in Claims 1, 7, 8, and 21-23, respectively. Therefore, for at least the reasons discussed above in connection with Claims 1, 7, 8, and 21-23, the Applicants respectfully submit that Claims 11, 17, 18, and 24-26 are also patentable over Gravano under 35 U.S.C. § 102(e).

Claims 9 and 10 inherit the features of Claim 1 that are patentable over Gravano and Weiss. Claims 19 and 20 inherit the features of Claim 11 that are patentable over Gravano and

Weiss. The Office Action does not even allege that Chang discloses these inherited patentable features. Therefore, even if Chang discloses everything that the Office Action alleges that Chang discloses (and the Applicants do not concede that Chang actually discloses these things), the addition of Chang to the hypothetical combination of Gravano and Weiss still would **not** disclose these inherited patentable features. For at least these reasons, Claims 9, 10, 19, and 20 are patentable over Gravano, Weiss, and Chang, even when considered in combination, under 35 U.S.C. § 103(a).

#### CONCLUSION

For the reasons set forth above, it is respectfully submitted that all of the pending claims are now in condition for allowance. Therefore, the issuance of a formal Notice of Allowance is believed next in order, and that action is most earnestly solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages or credit any overages to Deposit Account No. 50-1302.

Respectfully submitted,

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